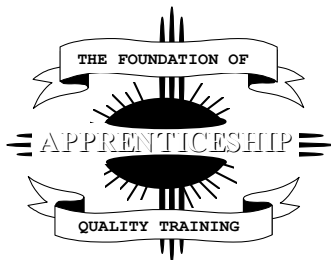




**STANDARDS OF APPRENTICESHIP
adopted by**

**INTALCO ALUMINUM CORPORATION
JOINT APPRENTICESHIP TRAINING COMMITTEE**

<u>Skilled Occupational Objective(s):</u>	<u>(sponsor)</u>	<u>DOT</u>	<u>Term</u>
INDUSTRIAL MAINTENANCE ELECTRICIAN		829.281-014	8000 HOURS
INDUSTRIAL MAINTENANCE MACHINIST		600.280-042	8000 HOURS
INDUSTRIAL MASON		861.381-026	6000 HOURS
INDUSTRIAL METER & INSTRUMENT TECHNICIAN		710.281-026	8000 HOURS
INDUSTRIAL MILLWRIGHT		638.281-018	8000 HOURS
INDUSTRIAL MOBILE EQUIPMENT MECHANIC		620.281-050	8000 HOURS
INDUSTRIAL SHEETMETAL FABRICATOR		804.281-010	8000 HOURS
INDUSTRIAL SUBSTATION ELECTRICIAN		820.261-018	8000 HOURS
INDUSTRIAL WELDER-FABRICATOR		819.384-010	8000 HOURS



APPROVED BY
Washington State Apprenticeship and Training Council
REGISTERED WITH
Apprenticeship Section of Specialty Compliance Services Division
Washington State Department Labor and Industries
Post Office Box 44530
Olympia, Washington 98504-4530

APPROVAL:
JANUARY 22, 1999

Initial Approval

By: ALAN LINK
Chairman of Council

JULY 21, 2000

Addendum Amended

By: PATRICK WOODS
Secretary of Council

JANUARY 18, 2002

Committee Amended

INTALCO ALUMINUM CORPORATION
JOINT APPRENTICESHIP TRAINING COMMITTEE

NOTE: THE FOLLOWING ADDENDUM SHALL BE SPECIFIED TO THE
INDIVIDUAL JOINT APPRENTICESHIP AND TRAINING COMMITTEE AND
ITS CRAFTS AND PROBLEMS:

The Company recognizes the need for the development and training of qualified employees to fulfill the Company's maintenance needs for trade and craft jobs required to maintain the efficiency of operations, quality, and service, in order to improved and maintain our competitive position in the Aluminum Industry.

This aim is accomplished by means of supervised shop and/or on-the-job training taught by competent trade and craft personnel and supervision with instruction in related technical subjects applicable to the apprenticeable trade and craft jobs.

1. GEOGRAPHICAL AREA COVERED:

This apprenticeship plan establishes the standards for training for trade and craft jobs at Intalco Aluminum Corporation, Ferndale, Washington.

2. MINIMUM QUALIFICATIONS:

Age: Applicants shall be at least 18 years of age.

Education: High school graduate or equivalent.

Physical: Satisfactorily meets the needs of the trades.

Testing: In the selection of apprentices, tests will be used to assure that applicants have the necessary abilities and aptitudes to succeed in all phases of the program. Tests to be used are as follows:

1. E.A. Space Visualization
2. E.A. Visual Pursuit
3. E.A. Numerical Reasoning
4. E.A. Numerical Ability

Other: Must be able to read, speak, and write the English language.

3. CONDUCT OF PROGRAM UNDER WASHINGTON EQUAL EMPLOYMENT
OPPORTUNITY PLAN:

A. Selection Procedures:

Notification to Employees of Apprentice Vacancies:

When an opening for apprentice vacancies occurs in the trade and craft jobs, current employees shall be notified by a posting on all plant bulletin boards. The posting period shall be limited to seven (7) full calendar days. Application forms

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shall be furnished by the Company and shall require the employee to outline the details of special training and experience tending to support their application for that particular craft. The application shall be signed by the employee and filed with the Apprenticeship Committee.

Employees who are absent during the period apprentice vacancies are posted will be considered eligible to place a proxy bid for such vacancies through their supervisor.

At the expiration of the posting period the Apprenticeship Committee shall consider all applications on file until the apprentice vacancies are filled.

Preliminary Screening:

The Apprenticeship Committee will determine from the records and applications those applicants that possess the required qualifications.

The applicant that lacks the minimum qualifications will be immediately informed in writing.

Pre-Entry Tests:

Applicants shall be given pre-entry tests, as outlined under section entitled "Minimum Qualifications."

The purpose of pre-entry tests is only to determine which applicants will be selected based on qualification standards, which are directly related to necessary job performance.

Should the applicant fail to possess the necessary abilities, he/she will be informed immediately in writing.

In case of disagreement, no appointments will be made until a satisfactory settlement has been reached.

Interviews:

Each applicant who successfully meets all qualifying standards will be referred to the Apprenticeship Committee for final interview. In case of disagreement, the appointment will not be made until satisfactory settlement has been effected. The Apprenticeship Committee may include other experienced craftspersons as part of the interviewing body. Applicant's work record, attendance, and conduct must be creditable during the immediate past 6 months. Prior successful training and/or experience will be considered in the selection process. Each interviewer will complete an evaluation form for each candidate, with interview scores made part of the total candidate profile.

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Accepted applicants will be notified of their appointment for training by letter from the Apprenticeship Committee. A copy of the notification letter shall be maintained in Apprenticeship records. Notification shall be made far enough in advance of the starting date to allow time for regular employment transfer procedures to be effected.

Applicants referred for final interview but not approved for training shall be informed by letter from the Chairman of the Apprenticeship Committee immediately after final selections have been made. The rejected applications shall remain on file and records will be kept for five years.

B. Affirmative Action Plan:

The recruitment, selection, employment and training of apprentices during their apprenticeship shall be without discrimination because of race, color, religion, natural origin or sex. The sponsor will take affirmative action to provide equal opportunity in apprenticeship and will operate the apprenticeship program as required under Title 29 of the Code of Federal Regulations.

In order to achieve these objectives the sponsor will undertake the following activities.

1. Dissemination of information concerning the nature of apprenticeship, requirements for admission to apprenticeship, availability of apprenticeship opportunities and the equal employment policy of the sponsor: Our outreach efforts will include articles in both the company newspaper and union newsletter conveying information and criteria for admission. We will also do specific mailings to under utilized groups to encourage program participation. As well, information on the tuition refund program will be distributed and opportunities provided for developing math skills to allow improved performance on qualifying tests.
2. Use journeymen and apprentices to promote the Affirmative Action Plan with:
3. Internal communication with of the sponsor's equal opportunity policy in such a manner as to foster understanding, acceptance, and support among the sponsor's various officers, supervisors, employees, and members and to encourage such persons to take the necessary action to aid sponsor in meeting its obligations under these rules: The Affirmative Action Plan of the Joint Apprenticeship Committee will be shared with Intalco leadership and Union leadership, to include all managers, first line supervisors, superintendents, and union executive board, as well as unit employees.

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4. Granting advanced standing by giving credit for previous trade experience or related course work will be granted equally for all applicants.
5. We will work with the Intalco management to encourage recruitment of employees from the minority and female ranks via contact with Private Industry Council, technical college, Lummi & Nooksack Indian Business Centers, Employment Security, and other employment service agencies.

4. **TERM OF APPRENTICESHIP:**

The term of training for all trade objectives shall be 8000 hours, except for Industrial Mason, which shall be 6000 hours.

5. **PROBATIONARY PERIOD:**

The first 1000 hours of the training program will be a probationary period in which the Apprenticeship Agreement may be terminated by the Apprenticeship Committee. During this period, the apprentice must qualify to continue the training passing the related technical subjects and by satisfactorily completing the work assignments on the job.

6. **RATIO OF APPRENTICES TO JOURNEYMEN:**

The ratio of Apprentices to Journeymen in each particular trade or craft shall not be more than: (All ratios apply to work force)

Trade:		Apprentice - Journeymen
Industrial Maintenance Machinists	1-Shop	1 - 4
Industrial Millwright		1 - 3
Industrial Mobile Equipment Mechanic		1 - 4
Industrial Sheetmetal Fabricator	1 - Shop	1 - 5
Industrial Welder-Fabricator	1 - Shop	1 - 5
Industrial Mason		1 - 3
Industrial Meter & Instrument Technician		1 - 5
Industrial Maintenance Electrician		1 - 3
Industrial Substation Electrician		1 - 5

7. **WAGE PROGRESSION:**

Apprentices shall be paid on the following the percentage basis in accordance with

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WAC 296-04-270(2)(c):

The established schedule of apprentice rates in each required six-month (1000 hours) training period for craft jobs shall be an equal percentage reduction from the craft rate to a beginning rate equivalent to Labor Grade #1. Percentages will be calculated and approved by the Apprenticeship Committee with each change in Appendix A of the base pay rate structure.

Apprentices shall not receive less than the following schedule would provide during their period of apprenticeship:

Craft Training Progression

0 - 1000 hours	55% of the craft base rate
1000 - 2000 hours	60% of the craft base rate
2000 - 3000 hours	65% of the craft base rate
3000 - 4000 hours	70% of the craft base rate
4000 - 5000 hours	75% of the craft base rate
5000 - 6000 hours	80% of the craft base rate
6000 - 7000 hours	85% of the craft base rate
7000 - 8000 hours	90% of the craft base rate

INDUSTRIAL MASON:

0 - 1000 hours	55% of the craft base rate
1000 - 2000 hours	60% of the craft base rate
2000 - 3000 hours	65% of the craft base rate
3000 - 4000 hours	70% of the craft base rate
4000 - 5000 hours	80% of the craft base rate
5000 - 6000 hours	90% of the craft base rate

Practical percentages shall be rounded to the nearest half percent.

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8. WORK PROCESSES:

The apprentice shall receive such instruction and experience as is necessary to develop a practical and skilled craft employee versed in the theory and practice of the trade. The apprentice shall also perform such other such duties in the shop or on the job as are commonly related to the trade. The amount of time served in each work process need not be entirely completed before routing to another work process and the assignment to the work processes need not be in the consecutive order as listed. Related training hours should be applied to the various work subjects as appropriate.

A.	<u>Industrial Mason:</u>	<u>D.O.T. #861.381-026</u>	<u>Hours</u>
1.	Tools, material and safety familiarization		1000
a.	Tools: mixing, cutting, measuring, aligning, ramming, jointing (power and hand) and others as apply to the trade.		
b.	Materials: mortar, brick, castables, plastic, washes, sand, ramming compounds, additives, caulking, insulation, anchors, reinforcing, and others as they apply to the trade		
c.	Safety: continuous		
2.	Tool, material and safety methods		1000
a.	Tools: Use of tools as they apply to the above materials		
b.	Materials: Use of materials as they apply to the projects listed below.		
c.	Safety: Continuous		

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3. Projects.....4000

Tools, material and safety familiarization and methods will be applied to the following projects of the trade:

- a. Concrete work: Includes concrete block structures, retaining wads, slabs, footings and concrete finishing.
- b. Refractories, castables, plastics: includes flue walls, holding furnace linings, electric furnace linings, ladle linings, launder rebuilding, pot rebuilding, and others as pertain to the trade.

TOTAL HOURS: 6000

ALL OF THE FOREGOING WORK EXPERIENCE AS HEREIN NOTED IS UNDERSTOOD TO MEAN AS IT PERTAINS TO THE TRADE HEREIN INVOLVED IN THESE STANDARDS.

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B. Industrial Mobile Equipment Mechanic: D.O.T. #620.281-050

	<u>Description</u>	<u>Code No.</u>	<u>Quota Hours</u>
1.	Gasoline Engine Repairs Pistons, Rings, Valves and Bearings Fuel Systems-Carburation and Fuel Pumps Ignition Starter, and Electrical Systems Lubrication System and Oil Pumps Cooling Systems	1-----	1,365
2.	Diesel Engine Repairs 2-cycle Engines 4-cycle Engines Piston, Rings, Valves and Bearings Injection systems Scavenging systems Starting systems Lubricating systems	2-----	1,365
3.	Drive Systems Clutches and Drives Transmissions, Transfer Cases, and Power Takeoff Final Drives Rear Wheels Tracks and Track Suspension Systems	3-----	1,000
4.	Control Systems Steering Systems Remote Controls Brake Systems Chassis and Springs	4-----	1,000
5.	Equipment Repair and Maintenance Winches and Hoisting Gear Hydraulic and Pneumatic Systems Air Compressors Bulldozers, Graders and Motor Road Patrols Cranes, Clamshells and Drag Lines Ditchers and Backhoes Welding and Burning (Gas and Electric)	5-----	2,500
6.	Lubrication and Lubrication Systems of all Equipment	6-----	500
7.	Oxy-acetylene Burning	13-----	170

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8.	Electric Arc Welding Perform basic welding repairs and fabrication	14-----	100
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TOTAL HOURS: 8,000

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C. Industrial Millwright: D.O.T. #638.281-018

	<u>Description</u>	<u>Code No.</u>	<u>Quota Hours</u>
1.	Familiarization Any activity designed to familiarize apprentice with care, proper safe use, nomenclature, and selection of tools and materials used in the craft	1-----	320
2.	Cut-off Material Perform machine cutting operation on various kinds of material such as shears, saws.	2-----	160
3.	Drill Perform basic drilling operation	3-----	160
4.	Pneumatic Tools Operation, uses	4-----	160
5.	Grinder Perform basic grinding operations	5-----	160
6.	Sanders Operate all types	6-----	160
7.	Power-actuated Equipment Use safely, properly.	7-----	14
8.	Measuring/Leveling Use precision equipment in maintenance, fabrication and replacement of machinery. Includes dial indicators, veniers, calipers, micrometers.	8-----	160
9.	Equipment and Machinery Replace, erect, move, assemble. Includes related operations.	9-----	1,070
10.	General Maintenance Maintain, troubleshoot, repair, rebuild, and modify plant machinery and equipment. Includes outages	10-----	3,374
11.	Bench Work	11-----	800

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File, ream, scrape, tap, chip, hone sharpen
tools, cut gasket, operate portable tools,
fabricate templates, brackets, etc.
Inspect, repair and test equipment.

12.	Other Assignments Housekeeping, safety, and other informative meetings. Includes other related activities not covered above.	12-----	600
13.	Oxy-acetylene Burning Perform cutting operators	13-----	400
14.	Electric Arc Welding Perform basic welding repairs and fabrication	14-----	132
15.	Lubrication and Inspection	15-----	330
TOTAL HOURS:			8,000

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D. Industrial Sheet Metal Fabricator: D.O.T #616.360-018

	<u>Description</u>	<u>Code No.</u>	<u>Quota Hours</u>
1.	General Sheet Metal Work	1-----	1,165
2.	Operation of Hand and Machine Tools	2-----	1,000
3.	Roofing, Spouting, and Guttering	3-----	700
4.	Cornice and Skylights	4-----	200
5.	Heating and Ventilation	5-----	1,000
6.	Furnace Work	6-----	800
7.	Exhaust and Blow Pipe Work	7-----	835
8.	Air Conditioning	8-----	265
9.	Soldering, Welding, and Brazing	9-----	500
10.	Special installations	10-----	935
11.	Fabrication and Installation of P.V.C., Plastic, and Fiberglass Work	11-----	500
12.	Hand Rigging	12-----	100
TOTAL HOURS:			8,000

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E. Industrial Maintenance Machinist: D.O.T #600.280.042

	<u>Description</u>	<u>Code No.</u>	<u>Quota Hours</u>
1.	Familiarization Any activity designed to familiarize the apprentice with care, proper safe use, nomenclature, and selection of tools and materials used in the craft	1-----	160
2.	Cut-off Material Rough cut to size	2-----	160
3.	Drill Basic drilling, tapping, reaming, counterboring, and countersinking	3-----	160
4.	Lathe Perform turning operation including tapers, threads, shoulders, chuckboring, drilling, reaming, and tapping 9" to 36" range	4-----	720
5.	Milling Machine Perform basic milling operations including, slabbing, splining, gearcutting, slotting, use of index head, and other supplementary equipment	5-----	480
6.	Grinder Perform surface, cylindrical, internal and cutter grinder operations	6-----	400
7.	Bore Face, bore, counterbore	4-----	320
8.	Job Bore and Fixtures Perform production work as required	8-----	320
9.	Heat Treating Perform softening, hardening, and case hardening processes.	9-----	120
10.	Metalizing Perform operations as required	10-----	240

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11.	Weld Perform simple welding and burning operations (temporary welds)	11-----	240
12.	Machine Repairs and Maintenance Strip down, inspect, fit, reassemble machines, or machine components; including preventative maintenance	12-----	720
13.	Inspection Inspect machine pieces for suitability for production and tool room work	13-----	480
14.	Methods, Planning, Job estimating Work with subfunctions involved	14-----	480
15.	Development Work with instrument makers on full line of machine and bench work involved	15-----	2,000
16.	Bench Work File, deburr, degrease, fit, scrape	16-----	240
17.	Basic Hydraulics	17-----	120
18.	Other Assignments Housekeeping, safety meetings, informative meetings, conferences, and all other maintenance job activities not specified above.	18-----	640

TOTAL HOURS: 8,000

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F. Industrial Substation Electrician: D.O.T. #820.261-018

For the guidance of Substation Electrical Apprentices at Intalco Aluminum Corporation, the following notes may be of some help to clarify the program.

The program is a four-year program consisting of 12 months of training and 144 hours of instruction at a technical training school or equivalent each year.

It is the responsibility of each journeyman to ensure that the apprentice is given all information possible regarding the trade during the time he/she is working for the journeyman.

Certain jobs are listed under each year. They are only to give the apprentice an indication of the level of his work for the year. They do not mean the jobs are the only work to be carried out or the only jobs to be tested on during the year.

Tests will be given each apprentice during each year of training to ensure the apprentice is satisfactorily completing his/her in-plant training.

Hours

1. First Year:2000

Skills:

- a. Introduction to clearance procedure
- b. Use of lamp changer and bulb base remover
- c. Sharpening of drill bits and use of drilling machine
- d. Use of megger
- e. Care and use of small hand tools
- f. Familiarity with safety and fire regulations
- g. Use of hand pipe threader and reamer including adjustable dies
- h. Elementary blueprint reading
- i. Use of ladders and pipe staging
- j. Use of electric hammers
- k. Use of fishtapes and pulling cables
- l. Simple conduit bends
- m. Introduction to the Code
- n. Familiarity with electrical materials
- o. Use of grinders
- p. Use of all cleaning equipment and materials
- q. Recognition and care of instruments
- r. Power actuated tools
- s. Terminations 600 V wire and cable
- t. Introduction of rectifier equipment

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Jobs:

- a. Repair extension cord
- b. Replace lamps on a scheduled basis
- c. Cut, thread, and ream conduit
- d. Megger test insulation
- e. Maintain area clean and safe
- f. High voltage switching
- g. Keeping records

Tools:

- a. Code book
- b. Electric pliers (Stakon)
- c. Electric pliers (Klein)
- d. Flat screw driver
- e. Knife
- f. Rule
- g. 6" or 8" adjustable wrench
- h. Pencil and notebook

2. Second Year:2000

Skills:

- a. Introduction to hydraulic bender
- b. Use of power threaders
- c. Use and inspection of shop slings and hoisting equipment
- d. Use of Cadweld Equipment
- e. Use of ammeter, ohmmeter, voltmeter
- f. Proper application of conduit fittings
- g. Soft soldering
- h. Taping up to 600 volts
- i. Battery maintenance
- j. Selection of fuses and circuit breakers
- k. Reading simple wiring and schematic drawings
- l. Introduction to the principles of trouble shooting
- m. Lubrication
- n. Code Book sections dealing with wiring systems
- o. Maintenance of high voltage AC disconnects
- p. Maintenance of high voltage DC disconnects
- q. Rectifier equipment maintenance

Jobs:

- a. Layout and drill piece of work, from simple print
- b. Wire up 110 volts light or outlet
- c. Connect motor - 600 volts
- d. Sling job of some description

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- e. Insulator cleaning
- f. Fuse and diode change, rectifiers

Tools:

- a. Hack saw frame
- b. Hammer
- c. 10" or 14" pipe wrench
- d. 8" or 10" adjustable wrench
- e. Center punch
- f. Square

3. Third Year:2000

Skills:

- a. Conduit bends, offsets, multiple runs
- b. Use of growler
- c. Use of tachometer
- d. Use of oil tester
- e. Use of Hi-pot testers
- f. Bus work
- g. Use of null point indicator
- h. Use of caliper, micrometers
- i. Code book - sections dealing with motors and transformers
- j. Advanced blueprint reading
- k. Use of ground detector

Jobs:

- a. Overhaul starter
- b. Wire up standard motor control
- c. Carry out inspection and maintenance of conversion equipment
- d. Machine clearance and drive maintenance
- e. Standard nameplate interpretation
- f. Select motor protection circuit

Tools:

- a. 12" or 14" pipe wrench
- b. Long nose pliers
- c. Tap wrench

4. Fourth Year:2000

Skills:

- a. Taping up to 14KV - strasscones - potheads
- b. Hard soldering

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- c. Breaker maintenance over 600 V
- d. Introduction to meter testing
- e. Control and relay systems up to 13.8 KV
- f. Code book
- g. Knowledge of elementary electronics
- h. Working on live equipment
- i. Advance trouble shooting
- j. Shift experience on dayshift relief
- k. Transformer and load tap changing equipment

Jobs:

- a. Oil circuit breaker maintenance
- b. Hook transformers of various configurations
- c. Load tap changing maintenance

Tools:

- a. Diagonal cutters
- b. Level
- c. Plumb bob
- d. Set Robertson screw drivers

TOTAL HOURS:

8000

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G. Industrial Maintenance Electrician: D.O.T. #829.281-014

The program is a four-year program consisting of 12 months training and 144 hours instruction at a technical training school or equivalent each year.

It is the responsibility of each journeyman to ensure that the apprentice is given all information possible regarding the trade during the time he/she is working for the journeyman.

Certain jobs are listed under each year. They are only to give the apprentice an indication of the level of his work for the year. They do not mean the jobs are the only work to be carried out or the only jobs to be tested on during the year.

Tests will be given each apprentice during each year of training to ensure the apprentice is satisfactorily completing his/her in-plant training.

1. <u>First Year:</u>	<u>Hours</u> 2000
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Skills:

- a. Use of lamp changer and bulb base remover
- b. Sharpening of drill bits and use of drilling machine
- c. Use of megger
- d. Care and use of small hand tools
- e. Familiarity with Safety and Fire Regulations
- f. Use of hand pipe threader and reamer including adjustable dies
- g. Elementary blueprint reading
- h. Use of ladders and pipe staging
- i. Use of electric hammers
- j. Use of fishtapes and pulling cables
- k. Simple conduit bends
- l. Introduction to the Electrical Code
- m. Familiarity with electrical materials

Skills: (Continued)

- n. Use of grinders
- o. Use of all cleaning equipment and materials
- p. Power actuated tools
- q. Recognition and care of instruments
- r. Terminations of 600 volt wire and cable

Tools:

- a. Code book
- b. Electric pliers (Stakon)
- c. Flat screw driver

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- d. Knife
- e. Rule
- f. 6" or 8" adjustable wrench
- g. Pencil and note book
- h. Diagonal Pliers

2. Second Year:2000

Skills:

- a. Introduction to hydraulic bender
- b. Use of power threaders
- c. Air gapping small motors
- d. Use and inspection of shop slings and hoisting equipment
- e. Use of bearing pullers
- f. Use of under cutters
- g. Use of Cadweld equipment
- h. Use of ammeter, ohmmeter, voltmeter
- i. Bearing identification and application
- j. Proper application of conduit fittings
- k. Soft soldering
- l. Taping up to 600 volts
- m. Battery maintenance
- n. Selection of fuses and circuit breakers
- o. Reading simple wiring and schematic drawings
- p. Introduction to the principles of trouble shooting
- q. Lubrication
- r. Code Book - sections dealing with wiring systems
- s. Clean and overhaul motors
- t. Sleeve bearing installation

Jobs:

- a. Layout and drill piece of work, from simple print
- b. Under cut commutator (under supervision)
- c. Overhaul a small motor
- d. Wire up 110 volts light or outlet
- e. Connect motor - 600 volts
- f. Sling job of some description

Tools:

- a. Hack saw frame
- b. Hammer
- c. 10" or 14" pipe wrench
- d. 8" or 10" adjustable wrench
- e. Center punch
- f. Square

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3. Third Year:2000

Skills:

- a. Brush and commutator maintenance
- b. Conduit bends, offsets, multiple runs
- c. Use of growler
- d. Use of tachometer
- e. Use of Hi-pot testers
- f. Bus bar work
- g. Use of caliper, micrometers
- h. Code book - sections dealing with motors and transformers
- i. Advanced blueprint reading
- j. Use of ground detector
- k. Introduction to basic electronics

Jobs:

- a. Overhaul starter
- b. Wire up standard motor control
- c. Carry out inspection and maintenance on DC motor or generator
- d. Machine tag-out and drive maintenance
- e. Standard nameplate interpretation
- f. Select motor protection circuit

Tools:

- a. 12" or 14" pipe wrench
- b. Long nose pliers
- c. Tap wrench

4. Fourth Year:2000

Skills:

- a. Hard soldering
- b. Breaker maintenance over 600 V
- c. Control and relay systems
- d. Code book
- e. Knowledge of elementary electronics
- f. Working on live equipment below 600 volts
- g. Advance trouble shooting
- h. Shift experience on dayshift relief
- i. DC Machine connections including welders
- j. Transformer connections
- k. Maintenance and operation of continuous feed equipment

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Jobs:

- a. Hookup DC machine involving a change of direction
- b. Hook transformers of various configurations
- c. Elevator and crane maintenance

Tools:

- a. 1/2" to 1 1/2" reamer and bit brace
- b. Diagonal cutters
- c. Level
- d. Plumb bob
- e. Set Robertson screw driver

TOTAL HOURS: 8000

ALL OF THE FOREGOING WORK EXPERIENCE AS HEREIN NOTED US
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H. Industrial Meter & Instrument Technician: D.O.T. #710.281-026

The program is a four-year program consisting of 12 month training and 144 hours instruction at a technical training school or equivalent each year.

It is the responsibility of each Technician to ensure that the apprentice is given all information possible regarding the trade during the time he/she is working for the Technician.

Certain jobs are listed under each year. They are only to give the apprentice an indication of the level of his work for the year. They do not mean the jobs are the only work to be carried out or the only jobs to be tested on during the year.

Tests will be given each apprentice during each year of training to ensure the apprentice is satisfactorily completing his implant training.

Hours

1. First Year:2000

Skills:

- a. Familiarity with safety and fire regulations
- b. Recognition and care of instruments
- c. Care and use of small hand tools
- d. Familiarity with instrument and electrical materials
- e. Use of all cleaning equipment and materials
- f. Elementary blueprint reading
- g. Use of hand taps and dies
- h. Use of hand tools
- i. Use of small hand grinder and bench grinder
- j. Read basic instrument scales
- k. Use of a volt ohmmeter
- l. Use of a potentiometer
- m. Sharpening of drill bits and use of drill press and hand drills
- n. Termination of 120/240 wires and cables
- o. Use of ladders

Skills: (Continued)

- p. Basics of Ohms Law
- q. Plant layout and functions
- r. Basic mathematics
- s. Use digital volt meter

Jobs:

- a. Maintain areas clean and safe

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- b. Keep records
- c. Make and repair TC's
- d. Replace charts and ink recorders
- e. Assist journeymen

Tools:

- a. 4 screw drivers 2" - 4" etc., different blade widths
- b. 1 champ pliers
- c. 1 knife
- d. Wooden rule
- e. 6" crescent wrench
- f. 8" or 10" crescent wrench
- g. Pencil and notebook
- h. Diagonal pliers 7"
- i. Holding screw driver
- j. Toot pouch
- k. Tool box
- l. Burnishing tool
- m. Channel lock
- n. Pan cleaner
- o. Diagonal pliers 4"

2. Second Year:2000

Skills:

- a. Familiarity with basic meter movements
- b. The use of a standard cell
- c. The use of a Wheatstone bridge
- d. Basic knowledge of electronic symbols
- e. Basics of LC, RC, RL, RLC Circuits
- f. Basic functions of potentiometer recorders
- g. Basic functions of pneumatic control
- h. Proficiency in the art of soldering
- i. Understanding of the different types of thermocouple and use
- k. Basic algebra
- l. Basics of AC
- m. Use of power supplies
- n. Basics of gas regulators
- o. Basics of gas regulators
- p. Basics use of oscilloscopes, electronic counters and signal generators
- q. Calibration of pressure gauges

Jobs:

- a. Make recorder checks

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- b. Prepare reports
- c. Test tubes
- d. Check diodes
- e. Clean test equipment
- f. Compare test meter with standards meters
- g. Check to with Potentiometer
- h. Assist in the calibration of continuous monitoring scales
- i. Assist in the calibration of watt-hour meters
- j. Assist in the calibration of protective relays

Tools:

- a. Instrument tweezers
- b. Eye loupe
- c. Soldering aids
- d. Needle nose pliers
- e. Heat sinks
- f. Plus first year

3. Third Year:2000

Skill:

- a. Full knowledge of DC
- b. Full knowledge of AC
- c. Full knowledge of transistors and SCR's
- d. The calibration and repair of meter movements
- e. Basic understanding of transformers
- f. A complete understanding of potentiometric circuits and instruments
- g. Basic understanding of protective relays and watt-hour meters
- h. Basics of computers
- i. Knowledge of oscilloscopes, electronic counter and signal generators
- j. Use of slide rule
- k. Algebra and trigonometry
- l. Calibration of pneumatic controllers
- m. Understanding of amplifiers
- n. Knowledge of shunts and their uses
- o. Advanced blueprint reading
- p. Basic understanding of current and potential transformers

Jobs:

- a. Test and trouble shoot transistors and SCR circuits

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- b. Assist in the maintenance of computers and relay equipment
- c. Repair amplifiers
- d. Calibrate and overhaul recorders
- e. Calibrate standard test equipment
- f. Check standard test equipment
- g. Calibrate meter movements
- h. Overhaul gas regulators
- i. Repair and calibrate continuous monitoring scales

Tools:

- a. Same as First and Second years
- b. Slide rule

4. Fourth Year:2000

Skills:

- a. Knowledge of integrated circuits
- b. knowledge of magnetic amplifiers
- c. Knowledge of protective relays
- d. Knowledge of watt-hours meters
- e. Knowledge of computers
- f. Proficient in the use of oscilloscope, counter, signal generator and other test equipment commonly used in the profession
- g. Full knowledge of pneumatic instruments and controls
- h. Ability to work alone on projects
- i. Proficiency in the calibration of DC and AC circuits
- j. Knowledge of flow calculations
- k. Knowledge of all mathematics used in the field of instrumentation (fraction, square root, ratio, algebra,
- l. The ability to order parts and supplies used in the trade
- m. Knowledge of transformer connections

Jobs:

- a. Repair and calibrate test equipment
- b. Repair and calibrate computers and associated equipment
- c. Calibrate watt-hour meters
- d. Calibrate and set protective relays
- e. Repair and test transistors, SCR and integrated circuits
- f. Prepare full reports and records of projects

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- g. Repair and calibrate pneumatic instrument and controllers
- h. Repair and calibrate electronic instruments
- i. Repair and calibrate magnetic amplifiers
- j. Analyze new equipment and revisions or modification to existing equipment

Tools:

Same as First, Second, and Third year

TOTAL HOURS:

8000

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I. Industrial Welder-Fabricator: D.O.T. #819.384-010

	<u>Description</u>	<u>Code No.</u>	<u>Quota Hours</u>
1.	Familiarization Any activity designed to familiarize the apprentice with care, proper safe use, nomenclature, and selection of tools and materials used in the craft	1-----	320
2.	Power Tools All power tools including shears, ironworkers, grinders, drills - both bench and hand held	2-----	640
3.	Oxy-Acetylene Burning	3-----	1,492
4.	Oxy-Acetylene Welding	4-----	640
5.	Heli-Arc Welding	5-----	320
6.	Electric Arc Welding	6-----	2,932
7.	Carbon Arc	7-----	320
8.	Wire Welding	8-----	320
9.	Layout Includes all measuring for fabrication and repair	9-----	830
10.	Power-Actuated Equipment Safe and proper uses	10-----	26
11.	Other Assignments	11-----	26
12.	Classroom Instruction		95

TOTAL HOURS: 8,000

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9. RELATED/SUPPLEMENTAL INSTRUCTION:

- A. Each apprentice shall enroll in and attend classes in subjects related to this trade, as approved by the State Board for Community and Technical Colleges, for a minimum of 144 hours year.
- B. The methods of related/supplemental training shall consist of one or more of the following:
 - ☐ Supervised field trips
 - ☐ Approved training seminars
 - ☒ A combination of home study and approved correspondence course
 - ☒ Technical College
 - ☒ Community College
 - ☐ Training trust
 - ☐ Other (specify)
- C. Hours 144
- D. Satisfactory progress must be maintained in related training classes. (See Section 10, Administrative/Disciplinary Procedures).
- E. The cost of outside classroom or self-study courses of instruction (tuition and books) will be paid by the company. The time spent by the apprentice in supervised training courses during working hours shall be paid at the apprentice's applicable training rate. Such time, however, shall not be regarded as hours worked. Travel time for related training which corresponds to the apprentice's normal scheduled hours will be paid, except in the case of commuting travel which may correspond to normal scheduled hours.

10. ADMINISTRATIVE/DISCIPLINARY PROCEDURES:

Satisfactory performance in on the job training shall be determined by representative work assignments covering the major divisions of the trade to be learned during that period of apprenticeship. The supervisor in charge shall appraise how well the apprentice performs on the work assignments of the major divisions of the trade. The apprentice will be rated 1, 2, 3, 4, or 5 and is required to attain a rating of 3 or better on all of the major divisions of the trade in which he/she has had work assignments during each period of the apprenticeship. An apprentice who fails to get a performance rating of 3 or better on all of the major divisions of the trade assigned during that period shall be held in the phase without change of rate of pay for an additional qualifying period. During this period, the apprentice shall receive special training in the type of work covered by the assignments which were failed. At the completion of this period, the apprentice must show satisfactory performance in all representative work assignments to receive the advancement in rate of pay. Should the apprentice fail to show satisfactory performance,

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he/she will be examined orally by the Committee to determine retention, being dropped from the apprenticeship program, or given an additional period.

The apprentice shall be called before the Apprenticeship Committee for failing a third consecutive period of related technical training and/or unsatisfactory performance rating in shop or on-the-job work. At this time, the apprentice may be dropped from the Apprenticeship program with notification being sent to the registering agency.

Credit for Previous Training and/or Experience:

A person's previous related training and/or experience will be thoroughly examined and may qualify an apprentice for advanced standing in an apprenticeship program. In such cases, the total time required in the program will be shortened, and the employee will be assigned to the rate applicable for the period to which he/she has been advanced. In no event shall more than 24 months of credit be granted (4,000 hours in the case of work processes) a person who has been granted advanced standing must still serve the probationary period.

No applicant shall be granted more than one qualifying test for the same job title within a period of twelve months unless they can show evidence that he/she has acquired additional knowledge or skill by means of practical experience, study or attendance at a recognized school.

An apprentice who voluntarily terminates their apprenticeship agreement, or whose apprenticeship agreement is terminated for cause, shall not be eligible to reapply for any apprenticeship or on-the-job training program.

Holidays not worked and reasonable short-term sickness or accident time lost will be credited toward the work process hours. Time lost due to extended or recurring sickness or accident, reserve duty, other leave of absence, or layoff will not be credited toward the work process hours. Regular vacation time will not be credited toward the work process hours.

Termination of Apprenticeship:

By Apprentice:

An individual apprentice may, at any time, terminate the apprenticeship. In doing so, he/she must follow the regular apprentice termination procedures and, in addition, submit a written notice of apprenticeship termination to the supervisor under whose direction he/she has been working. This notice will be made available immediately to the Apprenticeship Committee.

Following completion of the probationary period, if an apprentice elects to terminate his/her standing in the program, or the Apprenticeship Committee elects to cancel the apprentice's agreement for cause, he/she may be returned to an entry-level classification in the plant if the majority of the Apprenticeship Committee recommends such action. If the Committee does not recommend such action, the employee shall be terminated.

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By the Apprenticeship Committee:

The Apprenticeship Committee can terminate the apprenticeship agreement if the apprentice fails to meet the requirements of these Standards.

By the Company:

Company rules and regulations will be applicable to the apprentices. Violation of such rules and regulations shall make the apprentice subject to the same disciplinary actions as any other employee of the Company.

The Company reserves the right to suspend any training program where conditions necessitate such action.

Layoff of Apprentice:

In making layoffs of maintenance employees which are not expected to exceed twenty (20) days, apprentices will not be subject to the layoff. Should subsequent events cause the temporary layoff to exceed twenty (20) days, apprentices will be laid off according to the requirements specified below.

1. The ratio of apprentices to the craft will be applied to the layoff, so the number of apprentices will correspond in ratio with number of craft personnel affected. For example, if the apprentice/craft ratio is one apprentice to five in a craft classification, one apprentice will be laid off for each five in that classification.
2. When making such layoffs, the apprentice will not be placed on layoff until the corresponding number of craft employees have been laid off.
3. The apprentices to be laid off will be selected by seniority in the classification affected by the layoff. If seniority is equal, the lower badge number will be considered the more senior.
4. Displacement rights as provided in the Company - Union agreement in Article XL, section 3, will apply.

Graduation Certificate of Completion of Apprenticeship

All apprentices must pass all phases of related course instruction with a test score of at least 70% and satisfactorily complete all related on-the-job training reports.

After satisfactory completion of an apprenticeship under these standards, and upon recommendation of the Apprenticeship Committee, the Washington State Apprenticeship and Training Council shall furnish such apprentice with a Certificate of Completion of Apprenticeship in accordance with the State Apprenticeship Act and the rules of the Council.

Other Periods of the Apprenticeship - Advancement Requirements

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The apprenticeship term consists of the sum of periods as outlined in these Standards for any specific trade or craft. The term of such period is six months with a minimum of 1,000 hours of completed work.

In order to advance from one period of apprenticeship to the next higher period, the apprentice will be required to satisfactorily complete all shop or on-the-job work assignments as established for that period, and successfully pass all written examinations related to technical subject matter required in that period of apprenticeship.

Written examinations on related technical subjects will normally be required each period dependent upon Community College and Vocational School schedules. In the first or probationary period, the examinations will be given during and at the end of the training session. A score of 70% shall be considered the minimum passing grade.

During the course of the apprenticeship, apprentices will be required to acquire hand tools as they progress through the program.

Shop or On-The-Job Training

The training of the apprentice in the shops or on-the-job shall be the responsibility of the area supervisor or other supervisor as assigned by the head of the department. It shall be the responsibility of the supervisors so assigned to assure the apprentice is working with qualified craft personnel in each of the major divisions of the trade to be learned (Schedule of Work Processes) covered by these Standards of Apprenticeship during the course of normal work.

The department head or person who has the overall responsibility for the shop or on-the-job work experience of the apprentice will furnish each month the Apprentice Progress Report to the Apprentice Training Coordinator and Personnel. From this report, the total hours worked in each major division of the trade will be recorded on the Cumulative Record. The Cumulative Record will indicate when the apprentice's advancement in the trade has been withheld by action of the Apprenticeship committee because of failure to comply with the advancement requirements. In cases where the apprentice's advancement in apprenticeship is withheld, as per the provisions of the Standards of Apprenticeship, total time in apprenticeship may be increased.

When, in the opinion of the supervisor, it is necessary that the apprentice be assigned an extended number of hours beyond that regularly required for mastery of the major divisions, such hours shall be so indicated on the Apprentice Progress Report. Extension of hours in the major division need not constitute an extension of the apprenticeship, but may be deducted from some other major division in which the apprentice is proficient. In all cases, the apprentice will be required to complete within 25% plus-or-minus of the total number of hours of work required for each major division, except where this requirements is obviated by the granting of credit.

A Schedule of Work Processes for each of the trades covered in these Standards of Apprenticeship is prepared for guidance. The instruction of the apprentice need not

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follow a chronological order as they appear in the Schedule of Work Processes, but may be taught in sequence best suited to the volume and type of work common to the trade, provided that all apprentices shall receive instruction on all major divisions of the trade as listed in the Schedule of Work Processes, excepting those divisions obviated by credit allowance.

11. COMPOSITION OF COMMITTEE AND ALTERNATES:

The Employer Representatives Shall Be:

Larry Dutton, Chair
PO Box 937
Ferndale, WA 98248

Roy Gegenhuber
PO Box 937
Ferndale, WA 98248

Patrick Pollock
PO Box 937
Ferndale, WA 98248

The Employee Representatives Shall Be:

Carl Ratcliff, Secretary
PO Box 937
Ferndale, WA 98248

Richard Gray
PO Box 937
Ferndale, WA 98248

Vicki Henley
PO Box 937
Ferndale, WA 98248

12. SUBCOMMITTEE: (None)

13. TRAINING DIRECTOR/COORDINATOR:

Roy Gegenhuber
PO Box 937
Ferndale, WA 98248